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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,799	09/30/2003	Andrew Jarabek	PAT 2514-2 US	2232

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EXAMINER
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CHU, WUTCHUNG

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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05/31/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/675,799	<b>Applicant(s)</b> JARABEK ET AL.	
	<b>Examiner</b> Wutchung Chu	<b>Art Unit</b> 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-15 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because figure 1; figure 2 arrow 210 and 208; figure 3 arrow 300 and 302; and, figure 4 arrow 410 are not labeled. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the

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amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Regarding claim 15, the claim is "computer program" per se is not a "physical thing" and does not falls into one of the four statutory classes of invention: process, machine, manufacture, or composition of matter.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 15 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. "a computer program product" critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Therefore the term is assumed to be and interpreted as a processor that executes the disclosed functions, if the interpretation is incorrect it is suggested to further support the term "computer program product" in the disclosure.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Martin (US7016344).

Regarding claim 1, Martin discloses a time slot interchanging of time slots from multiple SONET signals without first passing the signals through pointer processors to synchronize them to a common clock (see column 2 line 1-10) comprising:

- receiving a portion of an input data stream (**see column 9 line 54**) having header data and payload data (**see column 6 line 55**), the payload data occurring at a first offset relative to the header data (**see column 5 line 50-53**);
- generating a delayed version of the portion of the input data stream (**see column 9 line 41-46 and figure 2b box 260 (M-1)-stage delay element**); and
- generating a portion of a retimed data stream by selecting between the portion of the input data stream and the delayed version of the portion of the input data stream, the retimed data stream including the header data

and the payload data, the payload data occurring at a second offset relative to the header data (**see column 9 line 53-63**).

Regarding claim 2, Martin teaches the header data includes a high-order pointer indicating a byte location of path overhead (**see column 3 line 41 H1H2 bytes**), and the payload data includes the path overhead (**see column 3 line 32**).

Regarding claim 3, Martin teaches further comprising modifying the high-order pointer to indicate the second offset (**see column 11 line 48-51**).

Regarding claim 4, Martin teaches further comprising modifying the path overhead based on the second offset (**see column 11 line 48-51**).

Regarding claim 5, Martin teaches the selecting is based on byte locations of the header data within the portion of the input data stream (**see column 11 line 48-54**).

Regarding claim 7, Martin teaches generating the delayed version comprises storing a number of bytes of the portion of the input data stream in a memory device (**see column 9 line 45 alignment buffer provides storage of bytes**).

Regarding claim 8, Martin teaches the number of bytes is based on a number of adjacent bytes of the header data within the portion of the input data stream (**see column 10 line 9-17**).

Regarding claim 9, Martin teaches the number of bytes is further based on a number of bytes for fine-tuning the portion of the input data stream (**see column 10 line 25-38**).

Regarding claim 10, Martin teaches comprising switching the payload data based on a position of the payload data within the portion of the retimed data stream (**see column 11 line 64-column 12 line 2**).

Regarding claim 11, Martin teaches the switching comprises directing the payload data to one of a plurality of output communication lines (**see figure 2a SONET Output 1-P**).

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claim 15 is rejected under 35 U.S.C. 102(e) as being anticipated by Primrose (US2004/0260858).

Regarding claim 15, Primrose discloses a configurable glueless microprocessor interface (**see paragraph 17**) comprising:

a delay circuitry and/or logic to programmably delay transmission of signals (**see paragraph 17 line 2-3 as corresponds to computer program product**);

- receive a portion of the an input data stream including having header data and the payload data, the payload data occurring at a first offset relative to the header data(**see paragraph 17 line 14-16**);

- generate a delayed version of the portion of the input data stream (**see paragraph 17 line 11**); and
- generate a portion of a retimed data stream by selecting between the portion of the input data stream and the delayed version of the portion of the input data stream, the retimed data stream including the header data and the payload data, the payload data occurring at a second offset relative to the header data (**see paragraph 17 and figure 3**).

***Claim Rejections - 35 USC § 103***

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiromori et al. (US6600742) in view of Martin (US7016344).



Regarding claim 12, Hiromori et al. discloses an add-drop multiplexer in an SDH transmission unit (**see Hiromori et al. column 4 line 6-11**) comprising:

- a high-order switch (**see Hiromori et al. column 7 line 9-10 high speed block and figure 1 box 2**);
- a low-order switch subtended from the high-order switch (**see Hiromori et al. column 7 line 34 tributary block and figure 1 box 3**); and

Regarding claim 12, Hiromori et al. disclose all the subject matter of the claimed invention with the exception of:

- a variable delay element between the high-order switch and the low-order switch, configured to receive a portion of an input data stream having header data and payload data, the payload data occurring at a first offset relative to the header data;
- generate a delayed version of the portion of the input data stream; and
- generate a portion of a retimed data stream by selecting between the portion of the input data stream and the delayed version of the portion of the input data stream, the retimed data stream including the header data and the payload data, the payload data occurring at a second offset relative to the header data.

Martin from the same or similar fields of endeavor teaches the use of alignment buffer which performs column alignment on the SONET input signals (**see column 9**

**line 37- column 10 line 6 and figure 2b box 219.1 as corresponds to variable delay element).**

- receiving a portion of an input data stream (**see column 9 line 54**) having header data and payload data (**see column 6 line 55**), the payload data occurring at a first offset relative to the header data (**see column 5 line 50-53**);
- generating a delayed version of the portion of the input data stream (**see column 9 line 41-46 and figure 2b box 260 (M-1)-stage delay element**); and
- generating a portion of a retimed data stream by selecting between the portion of the input data stream and the delayed version of the portion of the input data stream, the retimed data stream including the header data and the payload data, the payload data occurring at a second offset relative to the header data (**see column 9 line 53-63**).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the alignment buffer as taught by Martin in the add-drop multiplexer in an SDH transmission unit of Hiromori et al. in order to provide a greater levels of integration (**see Hiromori et al. column 1 line 23**).

Regarding claims 13 and 14, Hiromori et al. disclose all the subject matter of the claimed invention with the exception of:

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- the variable delay element is located between an output of the high-order switch and an input of the low-order switch, and
- the variable delay element is located between an output of the low-order switch and an input of the high-order switch.

Martin from the same or similar fields of endeavor teaches the use of alignment buffer which performs column alignment on the SONET input signals (**see column 9 line 37- column 10 line 6 and figure 2b box 219.1**). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the alignment buffer as taught by Martin in between high speed block and tributary block in the add-drop multiplexer in an SDH transmission unit of Hiromori et al. in order to provide a greater levels of integration (**see Hiromori et al. column 1 line 23**).

#### ***Allowable Subject Matter***

13. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Subrahmanyam et al. (US2002/0186719) disclose pointer adjustment wander and jitter reduction apparatus for a desynchronizer.

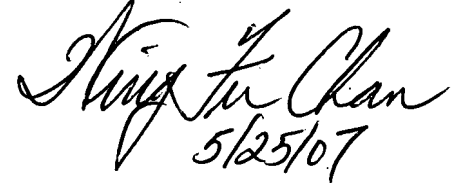
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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wutchung Chu whose telephone number is 571 270 1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on 571 272 7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WC/  
Wutchung Chu



WING CHAN  
SUPERVISORY PATENT EXAMINER